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Insights on Canadian Society

The ups and downs of minimum wage

by Diane Galarneau and Eric Fecteau



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- | | |
|----------------|--|
| . | not available for any reference period |
| .. | not available for a specific reference period |
| ... | not applicable |
| 0 | true zero or a value rounded to zero |
| 0 ^s | value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded |
| ^p | preliminary |
| ^r | revised |
| x | suppressed to meet the confidentiality requirements of the <i>Statistics Act</i> |
| E | use with caution |
| F | too unreliable to be published |
| * | significantly different from reference category ($p < 0.05$) |

The ups and downs of minimum wage

by Diane Galarneau and Eric Fecteau

Overview of the study

This article provides information on the evolution of the minimum wage in Canada since 1975, the average hourly earnings, and the ratio between these two indicators. It also sheds light on the increase in the proportion of employees paid at the minimum wage between 1997 and 2013, as well as the characteristics of workers most likely to be paid at this minimum rate.

- In 2013, the minimum wage was around \$10 in all provinces. In constant dollars, this rate was similar to the rate observed in the late 1970s.
- The minimum wage is often expressed as a proportion of average hourly earnings, but this ratio can vary depending on the data source used. In 2013, the overall minimum wage rate was between 42% and 49% of the average hourly earnings, depending on the source.
- Between 1997 and 2013, the proportion of employees paid at minimum wage increased from 5.0% to 6.7%. The bulk of this increase occurred between 2003 and 2010.
- When the minimum wage is revised upward, the proportion of employees paid at minimum wage may increase. This is because some employees whose wage was previously above the old level are paid the new rate, and join those who were already earning the minimum wage.
- The profile of minimum wage workers did not change between 1997 and 2013, as young workers, less-educated workers and workers in the service sectors were still more likely to be paid the minimum wage.

Introduction

Minimum wage studies generate substantial interest, given the links often made between the minimum wage, employment, and poverty. While there is no consensus on how the minimum wage affects poverty and inequality,¹ the association with employment is well-documented. In Canada, the effects of an increase in the minimum wage on total employment would typically be small or non-existent.² Rather, an increase in the minimum wage would seem to be associated with a decrease in employment among teenagers,³ who are most likely to be paid at this hourly rate.

The extent of the effect on employment depends on a number of factors,⁴ including the ratio of the minimum wage to the average hourly earnings (AHE). The higher this ratio—that is, the closer the minimum wage to average hourly earnings (all things being equal)—the more workers are affected by minimum wage legislation and the greater the effects on employment.⁵ These effects do not necessarily take the form of layoffs, but may instead take the form of reduced hiring, which diminishes the job prospects of teenagers.⁶

This article begins by examining how the real minimum wage, average hourly earnings and the ratio between these two indicators have evolved since 1975, based on data from the Survey of Employment, Payrolls and Hours (SEPH) and the Labour Force Survey (LFS).

Then, the article investigates the slight increase in the proportion of employees paid at minimum wage, which went from 5.0% in 1997 to 6.7% in 2013. It also looks at the characteristics of employees paid at minimum wage to determine whether the recent increase in the proportion of such workers is due to a change in their profile. In other words, are some groups of employees more likely to be paid at minimum wage than in the late 1990s?

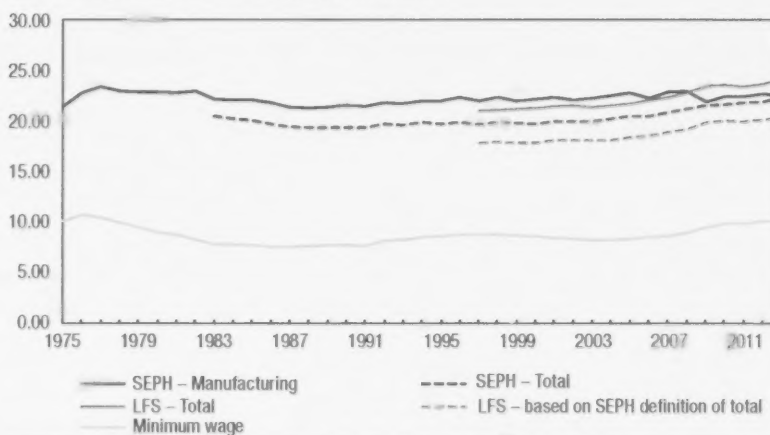
The real minimum wage is similar to the level observed in the late 1970s

In Canada, minimum wage legislation is of provincial jurisdiction, and therefore may vary from one province to another. A value for the minimum wage for Canada can be obtained by calculating the average of provincial minimum wages, weighted by the employment levels of each of the 10 provinces since 1975. These values can then be adjusted for inflation using the consumer price index (CPI) for each province to obtain a "Canadian" real minimum wage (in 2013 dollars).

Since 1975, the average Canadian real minimum wage varied between \$7 and \$11, peaking in 1975 and 1976 (Chart 1). Subsequently, the average minimum wage declined to under \$8 in the mid-1980s, and did not change much until 2005. It then began rising again, reaching approximately \$10 in 2010 and stayed around this level up to 2013.

Chart 1
The minimum wage¹ in 2013 was similar to the level in the late 1970s in real terms

average hourly earnings and minimum wage (2013 dollars)²



1. The minimum wage for Canada is the average of the minimum wages of the provinces, weighted by the number of employees in each province.

2. The average hourly earnings and the minimum wage are expressed in 2013 constant dollars, based on the consumer price indexes of each province.

Notes: The average hourly earnings from the SEPH (manufacturing sector and total) are those of employees paid by the hour, whereas the LFS series for all employees includes both employees who are paid by the hour and employees with a fixed salary. The LFS series based on the SEPH definition of the total includes employees paid by the hour from all sectors, except in agriculture and other services.

Sources: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH); Labour Force Survey (LFS); Employment and Social Development Canada (minimum hourly rates by year and by province).

In the case of average hourly earnings (AHE), the level may vary, depending on the source. In this article, two sources are used: the Survey of Employment, Payrolls and Hours (SEPH), which collects information from businesses on the wages paid to their employees; and the Labour Force Survey (LFS), which collects data from households on the 'usual' earnings of paid workers (see *Data sources, methods and definitions*). Four versions of the AHE were calculated:

- 1) The AHE of employees paid by the hour in the manufacturing sector in the SEPH from 1975 to 2013
- 2) The AHE of employees paid by the hour for all industrial sectors in the SEPH from 1983 to 2013

- 3) The AHE of employees paid by the hour for all industrial sectors in the LFS from 1997 to 2013⁷

- 4) The AHE of all paid employees in the LFS (regardless of the method of compensation) from 1997 to 2013.

The SEPH series on the manufacturing sector is the only one going back to 1975. According to that series, the AHE of employees paid by the hour in the manufacturing sector remained fairly stable at around \$22 (in 2013 constant dollars) throughout the period. However, this sector's share of total employment declined over time, from 19% in 1975 to 10% in 2013. Furthermore, the gap between the AHE of the manufacturing sector and the AHE of all sectors combined also declined.⁸ As a result, the trends exhibited by the manufacturing

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sector became less representative of the total paid workforce in recent years.

The series of employees paid by the hour in all industrial sectors in the SEPH, which begins in 1983,⁹ is more representative of the Canadian paid workforce. According to this series, the AHE remained stable at around \$20 until the mid-2000s but gradually increased in recent years, to more than \$22 in 2013.

This recent upward trend is also confirmed by the two LFS series, which both begin in 1997. In the first LFS series on employees paid by the hour, the AHE went from \$18 in 1997 to \$20 in 2013. In the LFS series on all employees, the AHE went from \$21 to \$24 during the period. The higher AHE levels in the latter series are due to the fact that the AHE covers not only employees paid by the hour but also employees with a fixed salary, who have a higher AHE.

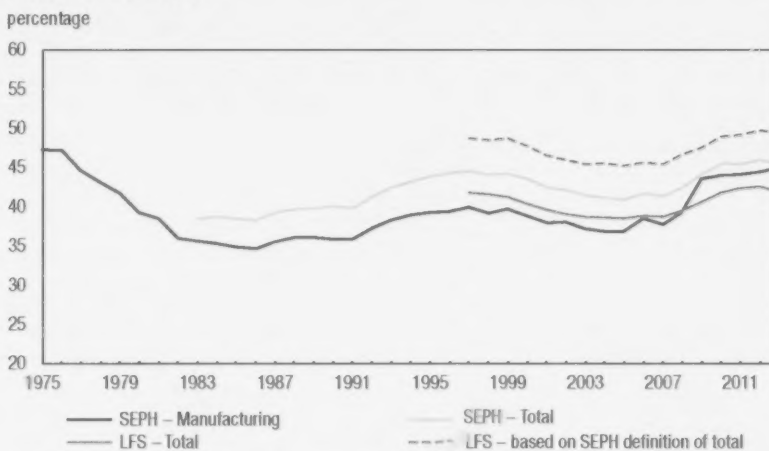
A ratio approaching the values of the mid-1970s

An important indicator of how increases in the minimum wage affect employment is the ratio of the minimum wage to the average hourly earnings (AHE). Since the AHE remained fairly stable throughout the study period, variations in the ratio are largely attributable to changes in the real minimum wage.

Four ratios were calculated based on the four versions of the AHE described above. Although the ratio varies over time and depending on the series used, it is possible to distinguish four major periods: a period of decline between 1975 and 1986, a period of increase between 1986 and 1997, a new decline extending to 2005, and, lastly, another rise between 2005 and 2013 (Chart 2).

Chart 2

The ratio of the minimum wage¹ to the average hourly earnings² is on the rise since the mid-2000s



1. The minimum wage for Canada is the average of the minimum wages of the provinces, weighted by the number of employees in each province.

2. The average hourly earnings and the minimum wage are expressed in 2013 constant dollars, based on the consumer price indexes of each province.

Notes: The average hourly earnings from the SEPH (manufacturing sector and total) are those of employees paid by the hour, whereas the LFS series for all employees includes both employees who are paid by the hour and employees with a fixed salary. The LFS series based on the SEPH definition of the total includes employees paid by the hour from all sectors, except in agriculture and other services.

Sources: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH); Labour Force Survey (LFS); Employment and Social Development Canada (minimum hourly rates by year and by province).

During the first period, from 1975 to 1986, the series based on SEPH data for the manufacturing sector shows a decline, with the ratio going from a high of 47% in 1976 to a low of 35% in 1986. This decrease was the result of a greater decline in the minimum wage (from \$11 to less than \$8) than in the AHE (from \$23 to \$22).

During the second period, from 1986 to 1997, the minimum wage increased by approximately \$1 per hour while the AHE remained relatively stable (at nearly \$22 in the manufacturing sector and nearly \$20 in all sectors combined), which caused the ratio to rise by 5 to 6 percentage points, depending on the series used.

During the third period, from 1997 to 2005, the ratio fell again, dropping 3 to 4 percentage points, since the real minimum wage declined by roughly 40 cents while the AHE rose from 50 to 80 cents, depending on the series.

Finally, starting in 2005, the ratio was generally trending upward, regardless of the series used. The increase mainly occurred from 2005 to 2010, with the ratio subsequently remaining stable (through to 2013). According to the SEPH series on all industrial sectors, the ratio went from 41% in 2005 to 46% in 2013. In the case of the SEPH series on the manufacturing sector, the ratio rose even more (from 37% to 45%). As for the ratio based on the LFS's AHE, the increase went from 39% to 42% for all employees and from 45% to 49% for employees paid by the hour.

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Recent rise of the ratio in most provinces

In 1975, the real minimum wage (in 2013 dollars) stood at nearly \$10 an hour in all provinces. Even though it evolved differently in each province during the period, in 2013 it was again hovering around \$10 in most provinces.

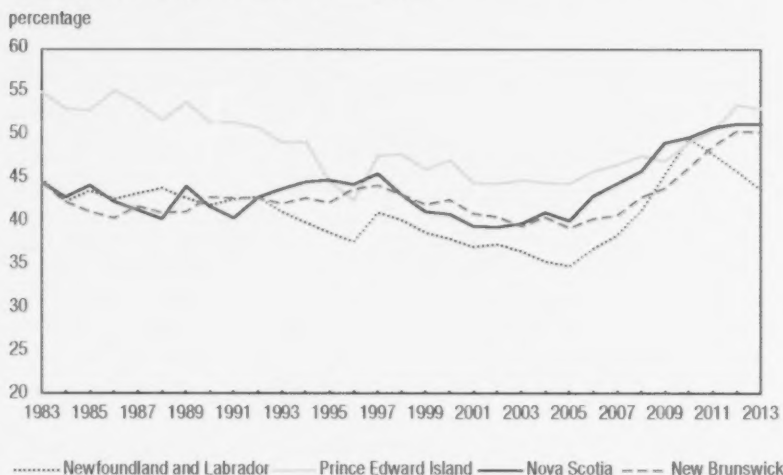
The ratio of the minimum wage to the AHE of each province fluctuated in recent decades, as has been the case in Canada as a whole. However, in the past 10 years, the ratio increased in most provinces (Charts 3.1 to 3.3). This is because the minimum wage has grown more rapidly than the AHE in recent years.¹⁰

In the Atlantic provinces, the increase started in 2005, with the ratio gaining between 9 and 11 percentage points in each of these provinces. In Newfoundland and Labrador, the ratio even went from 35% in 2005 to 50% in 2010, before falling back to 44% in 2013. In Ontario, the ratio gained more than 7 percentage points starting in 2003 (from 40% to 47%), while in British Columbia it jumped 7 percentage points from 2010 to 2013 (going from 39% to 46%). The ratio also rose in Alberta (starting in 2004) and Manitoba (starting in 2005) by 6 and 7 percentage points respectively.

In contrast, the ratio fluctuated less in Saskatchewan and in Quebec over the period. In Saskatchewan, the ratio varied between 40% and 44% during the whole period, while the ratio in Quebec varied between 44% and 48% during the 2000s.¹¹

Chart 3.1

In the Atlantic region, the ratio of the minimum wage to the average hourly earnings has increased since the mid-2000s

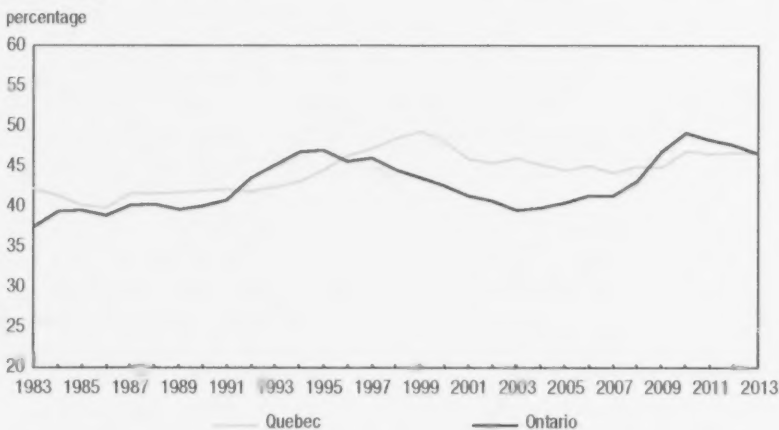


Notes: The average hourly earnings and the minimum wage are expressed in 2013 constant dollars, based on the consumer price indexes of each province. For each province, the average hourly earnings used for this ratio are based on the SEPH data on employees paid by the hour in the province.

Sources: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH); Employment and Social Development Canada (for minimum hourly rates by year and by province). The ratios were calculated by dividing the minimum wage for each month and year by the average hourly earnings of the corresponding province.

Chart 3.2

Increase in the ratio between 2003 and 2010 in Ontario and stability in Quebec since 2001



Notes: The average hourly earnings and the minimum wage are expressed in 2013 constant dollars, based on the consumer price indexes of each province. For each province, the average hourly earnings used for this ratio are based on the SEPH data on employees paid by the hour in the province.

Sources: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH); Employment and Social Development Canada (for minimum hourly rates by year and by province). The ratios were calculated by dividing the minimum wage for each month and year by the average hourly earnings of the corresponding province.

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Recent rise in the proportion of employees paid at minimum wage

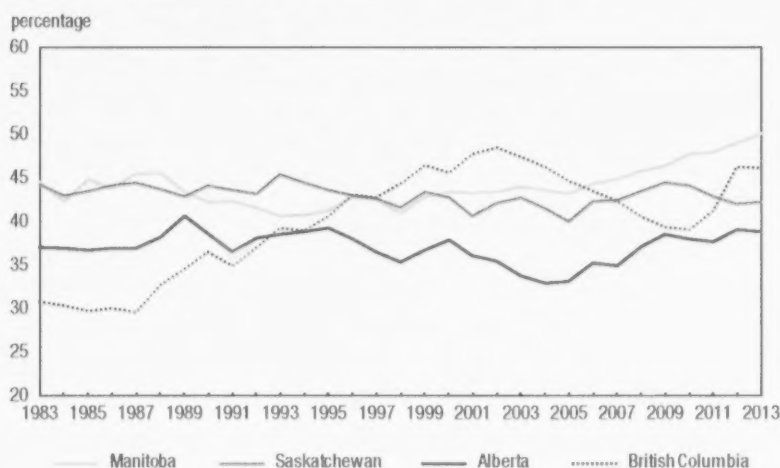
Since the LFS began collecting information on the remuneration of paid employees, it has been possible to track the number of employees paid at minimum wage and to express their number as a proportion of the total number of paid employees.¹² Since 1997, there has been a modest increase, from 5.0% to 6.7%, in the proportion of those who are at minimum wage. This increase has sometimes been interpreted as an increase in the proportion of low paid jobs.

However, an increase in the minimum wage can "automatically" increase the proportion of paid employees at minimum wage. This is because when the minimum wage is revised upward, some of the employees whose wage was formerly above the old minimum wage level are now paid at the new rate, and join those who were already earning the minimum wage.

This effect was quite clear among young employees aged 15 to 19 between 2003 and 2010, when the minimum wage increased in a number of provinces. During this period, the rate of young employees working at minimum wage went from 30% to 45% (Chart 4). This increase coincided with a decrease in the proportion of employees in this age group who were paid at a rate between the minimum wage and 10% above the minimum wage; their proportion went from 31% to 21% (not accounting for the possibility of job losses).

Thus, there is a positive correlation between the minimum wage to AHE ratio and the proportion of employees paid at minimum wage.

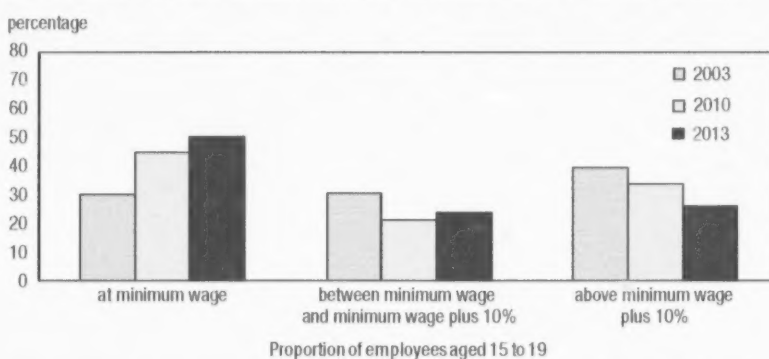
Chart 3.3
Increase in the last few years in Manitoba, Alberta and British Columbia and relative stability in Saskatchewan



Notes: The average hourly earnings and the minimum wage are expressed in 2013 constant dollars, based on the consumer price indexes of each province. For each province, the average hourly earnings used for this ratio are based on the SEPH data on employees paid by the hour in the province.

Sources: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH); Employment and Social Development Canada (for minimum hourly rates by year and by province). The ratios were calculated by dividing the minimum wage for each month and year by the average hourly earnings of the corresponding province.

Chart 4
Among paid workers aged 15 to 19, the increase in the proportion of minimum wage employees corresponded with a decrease in the proportion of those earning between the minimum wage and 10% more than the minimum wage



Source: Statistics Canada, Labour Force Survey, 2003, 2010 and 2013.

The higher the ratio and the closer the minimum wage to the AHE, the greater the increase in the proportion of employees paid at

minimum wage. As a result, these two indicators typically move in the same direction (Chart 5).¹³

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The profile of employees paid at minimum wage has not changed

Has the increase in the minimum wage been proportionally greater for some population groups? The most appropriate source to answer this question is the LFS, since it has wage data going back to 1997 in addition to a large range of sociodemographic characteristics.

In 2013 (as in 1997), youth, women and persons with a low level of education were the groups most likely to be paid at minimum wage (Table 1). In 2013, 50% of employees aged 15 to 19 and 13% of those aged 20 to 24 were paid at minimum wage. Among women, the rate was 8% (compared with 6% among men); among the least-educated, specifically those with less than a high school diploma, the proportion was 20%, compared with less than 3% among university graduates.

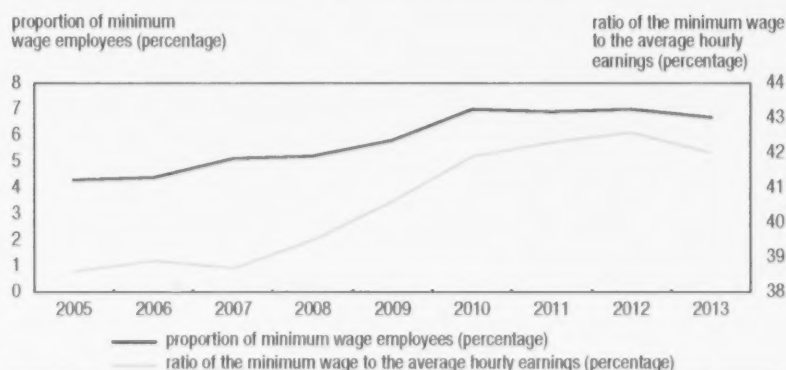
Low educational attainment is more often associated with minimum wage among women. In 2013, the rate of working at minimum wage for women aged 25 to 64 with less than a high school diploma varied between 11% and 15%, compared with 4% and 5% among their male counterparts (Chart 6).

Some employment characteristics were also associated with a higher rate. This was the case among part-time employees, 22% of whom earned the minimum wage, as well as employees in the retail trade (17%) and food and accommodation sectors (27%).

Minimum-wage policies affected relatively few employees in Alberta and Saskatchewan. The lowest rate of work at minimum wage in 2013 was in Alberta, at scarcely 2%.¹⁴ Saskatchewan followed with a rate

Chart 5

When the ratio of the minimum wage to the average hourly earnings increases, the proportion of minimum wage employees also tends to increase



Sources: Statistics Canada, Labour Force Survey; Employment and Social Development Canada (minimum hourly rates by year and by province), 2005 to 2013.

Table 1

Proportion of minimum wage employees and distribution of employees paid at minimum wage, 1997 and 2013

	Proportion at minimum wage		Distribution of employees at minimum wage	
	2013	1997	2013	1997
	percentage	percentage	thousand	
Total	6.7	5.0	1,007.1	568.5
Sex				
Men	5.5	3.9	41.1	40.8
Women	8.0	6.2	58.9	59.2
Age group				
15 to 19	50.2	31.5	39.8	36.0
20 to 24	13.4	9.7	21.0	20.9
25 to 34	3.5	3.0	12.0	16.0
35 to 64	2.8	2.3	24.8	25.8
65 and over	7.0	8.3	2.5	1.3
Education (15 years of age and over)				
Less than a high school diploma	20.4	11.3	29.3	40.1
High school diploma and some postsecondary education	10.2	5.9	41.8	36.3
Postsecondary diploma	3.4	2.7	18.2	17.7
University degree	2.6	1.6	10.6	5.9
Work arrangement				
Full time	3.4	2.8	41.0	45.0
Part time	21.8	14.9	59.0	55.0
Industry				
Goods	2.6	2.1	8.3	10.7
Services	7.8	6.0	91.7	89.3
Retail trade	17.4	10.2	32.9	25.3
Food and accommodation	26.9	21.0	27.8	28.7
Province				
Newfoundland and Labrador	5.9	9.2	1.2	2.7
Prince Edward Island	9.3	4.7	0.6	0.4
Nova Scotia	5.9	7.9	2.3	4.5
New Brunswick	7.9	6.8	2.4	3.2
Quebec	6.2	3.6	21.5	17.2
Ontario	8.9	5.6	51.5	43.4
Manitoba	6.0	3.9	3.2	2.9
Saskatchewan	4.5	5.7	2.0	3.5
Alberta	1.8	3.0	3.3	6.1
British Columbia	6.4	6.1	12.0	16.1

Source: Statistics Canada, Labour Force Survey, 1997 and 2013.

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of less than 5%. In contrast, Prince Edward Island and Ontario had the highest proportions (nearly 9%).

Between 1997 and 2013, the proportion of employees paid at minimum wage increased across the board (except for those aged 65 and over and employees in some provinces such as Alberta, Saskatchewan, Newfoundland and Labrador, and Nova Scotia), meaning no subgroups are more likely today than in 1997 to be represented among employees paid at minimum wage.¹⁵

As a result, the profile of employees paid at minimum wage did not change much during the period, since the great majority of them are still youth, part-time employees and employees in service industries. Hence, 61% of minimum wage employees were aged 15 to 24 in 2013 (57% in 1997). Also, 59% of them held a part-time job in 2013 (55% in 1997). Finally, in 2013, 61% of all minimum wage employees were in the retail trade or food and accommodation sectors (54% in 1997).

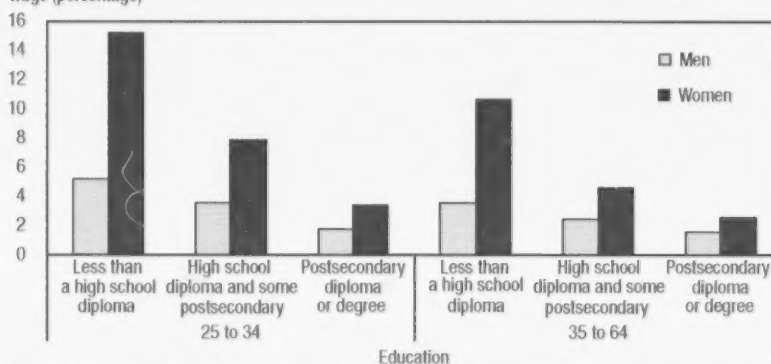
Conclusion

This article has examined the change, in constant dollars, of the minimum wage, average hourly earnings (AHE) and the ratio between these two indicators in Canada and the provinces since 1975. Although the real minimum wage varied over the period, the 2013 minimum wage was almost identical to levels seen in the mid 1970s. To study the ratio between the minimum wage and average earnings, several versions of the AHE were used, with some covering a relatively long observation period, and others

Chart 6

A lower level of education is most often associated with minimum wage among women

proportion at minimum wage (percentage)



Source: Statistics Canada, Labour Force Survey, 2013.

covering a shorter period. Although the ratio results vary depending on the source used for the AHE, four periods can be identified: a decrease in the ratio, covering the years 1975 to 1986; a rebound, between 1986 and 1997; then another decline, between 1997 and 2005; and finally another increase, between 2005 and 2013. Since the AHE remained relatively stable throughout the study period, changes in the ratio are largely attributable to changes in the real minimum wage.

Between 1997 and 2013, the proportion of employees paid at minimum wage went up, from 5.0% to 6.7%. This increase mainly occurred between 2003 and 2010, when a number of provinces raised their hourly minimum rate. Increases in the minimum wage often correspond with an increase in the proportion of employees paid at minimum wage. This was especially true for paid workers aged 15 to 19: between 2003 and 2010, the

proportion paid at minimum wage rate increased by 15 percentage points, while the share of those paid at a rate between the minimum wage and 10% above the minimum wage decreased by 10 percentage points during the same period.

While the share of employees earning the minimum wage increased between 1997 and 2013 for most population groups, the groups most likely to be paid at this wage remained the same. In 2013, like in 1997, youth, less-educated individuals and part-time employees were more likely to be paid at minimum wage. The retail trade sector and the food and accommodation sector still had the largest proportion of workers paid at minimum wage.

Diane Galarneau is a senior analyst in the Labour Statistics Division of Statistics Canada and Eric Fecteau is a student participating to the University of Ottawa co-operative education program.

Data sources, methods and definitions

Data sources

This article is based on the Survey of Employment, Payrolls and Hours (SEPH) and the Labour Force Survey (LFS). Residents from the Northwest Territories, Yukon and Nunavut have been excluded because these regions are not included in these surveys for the entire study period.

On a monthly basis, the SEPH provides information about earnings, number of jobs (i.e. occupied positions), vacant positions and hours worked, by detailed industry, at the national, provincial and territorial levels. Monthly survey estimates are produced by a combination of a census of payroll deductions provided by the Canada Revenue Agency and the Business Payrolls Survey (BPS), which collects data from a sample of 15,000 businesses.

The Labour Force Survey (LFS) is a monthly household survey of about 54,000 households across Canada. Demographic and labour force information is obtained for all household members 15 years of age and over. Excluded are persons living in institutions, on Indian reserves or in the territories.

Definitions

Average hourly earnings

For several decades, the SEPH has been calculating an average hourly earnings rate for employees whose mode of compensation is "paid by the hour." In 2013, these workers accounted for 58% of all workers in establishments classified in the SEPH, up from 52% in 2004 and 47% in 1983. The other categories are "employees with a fixed salary" (35% of workers in 2013) and employees paid otherwise, such as on a piecework basis (7% in 2013). Since 1983, businesses of all sizes have been included in the sample, whereas, before 1983, businesses with fewer than 20 employees were excluded.

With regard to the LFS, average hourly wage levels can be calculated back to 1997, either for all workers or for employees paid by the hour. In the LFS, only "usual" earnings are included, whereas in the SEPH, all types of earnings are included, including bonuses.

Four versions of the average hourly earnings are used in this article: two from the SEPH and two from the LFS:

1. The first series, based on the SEPH, covers workers paid by the hour (excluding overtime) in the manufacturing sector in each province for the period from 1975 to 2013. The data have been retrieved from CANSIM tables 281-0022, 281-0004 and 281-0029.
2. The second series, also based on the SEPH, covers all workers paid by the hour (excluding overtime). The data have been retrieved from CANSIM tables 281-0004 and 281-0029. This series begins in 1983, after businesses with fewer than 20 employees were added to the survey.
3. The third series was calculated using the LFS, but on the basis of workers paid by the hour in industrial sectors covered by the SEPH (i.e. all industries except agriculture and other services). This series begins in 1997, when the LFS began collecting information on compensation.

4. The fourth series was calculated from the LFS and covers all paid workers in all industrial sectors, whether they are paid by the hour or otherwise. In this series that also begins in 1997, the AHE is higher since the hourly earnings of employees with a fixed salary are higher than those of workers paid by the hour on average.

Minimum wage

Minimum hourly rates are obtained from Employment and Social Development Canada (ESDC) and can be viewed at <http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=1>.

The minimum wage for Canada as a whole is the average of the monthly minimum wages of the provinces, weighted by the number of workers in each province (see CANSIM tables 281-0015, 281-0001 and 281-0023). The number of employees for the federal government was unavailable from 1975 to 1982, but it was estimated at 40% of the number of all government employees for this period (percentage based on the values recorded for 1975). Starting in July 1996, the minimum wage for federal employees was that which prevailed in their province of employment. Therefore, no distinction has been made starting from that date.

Values in 2013 constant dollars

The values for the minimum wage and the average hourly earnings in real dollars were obtained using the all-items consumer price index specific to each province (see CANSIM table 326-0021).

Minimum wage legislation

The minimum wage—the lowest wage rate that an employer can pay its employees—is dictated by labour laws. Since these laws are under provincial jurisdiction, all Canadian provinces set a minimum hourly rate, which is adjusted periodically.

Self-employed workers and unpaid family workers are not covered by minimum wage legislation and are not included in this analysis. Other exclusions and special implementation provisions vary by year and province. For example, minimum wage legislation does not apply to domestic and family aid workers living with the employer (Alberta, New Brunswick, Prince Edward Island, Manitoba, British Columbia and Quebec); agricultural workers (Ontario); and home workers. Special minimum-wage rates may apply to some workers with non-hourly pay and tips.

In this article, minimum wage workers are those who receive the "minimum wage for experienced adult workers" that is set by their province. Also included are workers who receive a wage below this threshold. Hourly earnings below the established minimum do not necessarily indicate an infringement of the law—they may be received by workers not subject to the law or subject to rates below the minimum wage, such as some workers in food services (e.g. servers).

The proportion of workers paid minimum wage is obtained by calculating the number of employees working at minimum wage for each province and for each month since 1997. The annual estimate for each province is based on the average of the 12 monthly observations, while the total for Canada is the average of the provincial estimates.

Notes

1. According to some analysts, regulating the minimum wage is not very effective in combating poverty since people paid at minimum wage do not necessarily belong to a low-income household (Neumark and Wascher 2008; Gunderson 2008). According to the SLID, 10% of workers paid at minimum wage belonged to families whose family income was below the poverty threshold in 2011. However, Fortin and Lemieux (1997) found that regulating the minimum wage can contribute to income redistribution because minimum-wage workers are more likely than other workers to belong to low-income families. Fortin and Lemieux (2014) also illustrated that increases in the minimum wage explain much of the relatively faster increase in wages in the lower income quintile in Canada since 2005 (compared with the median quintile).
2. See Baker et al. (1999); Gunderson (2008), Fortin (2010); Lemieux (2011); Brochu and Green (2012).
3. The negative effect on employment is higher in Canada than in the United States. See Gunderson (2008) and Fortin (2010) for more information on this subject.
4. These factors include globalization, changes in technology and shifts in the unionization rate.
5. The effect on employment varies between 3% and 6%, depending on the study. According to Fortin (2010), when the ratio is close to 50%, the effects on the employment of teenagers are relatively significant.
6. According to Brochu and Green (2012), when the minimum wage is high, labour market transitions (hirings and layoffs) tend to decrease. For teenagers, the reductions in hirings largely exceed the number of layoffs, which explains why there is a significant and negative effect on employment in this age group. For older workers, the reduction in layoffs largely offsets the reduction in hirings, with a nil or insignificant effect on employment.
7. Excluding agriculture and other services, which are not covered by the SEPH.
8. From the mid-1980s to 2005, the AHE of the manufacturing sector was 8% to 13% higher than that of all sectors combined but, by 2013, this gap had shrunk to approximately 1%.
9. Since 1983, the SEPH's AHE data have covered businesses of all sizes, whereas before 1983 they covered only those with 20 employees and more. The inclusion of small businesses caused the AHE to decline after 1982. However, the series on the manufacturing sector exhibits a fairly stable trend, since this sector is largely made up of businesses with 20 employees and more. For this reason, it was used to calculate the ratio in the years prior to the redesign of the SEPH.
10. The SEPH series on hourly paid employees for all industrial sectors was used to analyze the ratios by province, because it is representative of a greater share of employees (approximately 65% of paid employees in 2013) than the series focusing solely on the manufacturing sector (which accounted for slightly more than 11% of employees paid by the hour in 2013) and also because it covers three decades. In 2013, the highest AHE was recorded in Alberta (\$25) and the lowest in Prince Edward Island (\$19). In 1983, this gap was higher, with the AHE ranging from \$14 in Prince Edward Island to \$23 in British Columbia. All data on real minimum wage, the real AHE and the ratio between these two indicators for Canada and the provinces from 1983 to 2013 are available in Table A.1 (appended).
11. Even though the levels were different, similar trends were recorded starting in 1997 for the two LFS series, namely an increase in the ratio because the minimum wage grew more rapidly than the AHE in most provinces.
12. The LFS assigns an hourly wage to employees not paid by the hour, based on the answers that respondents provide on hours worked. Those who earn less than or equivalent to the minimum wage in the province where they reside are thus considered as being paid at minimum wage.
13. This correlation is verified using a linear regression model covering the period from 1997 to 2013, in which the dependent variable is the proportion at the minimum wage by province and the independent variables are the ratio and dummy variables for each province. The coefficient estimated by the ratio was 0.40, which means that a 1 percentage point increase in the ratio was associated with a 0.4 percentage point increase in the rate of employment at minimum wage.

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14. Since the minimum wage is fairly similar from one province to another (around \$10), most of the interprovincial differences were not due to differences in minimum-wage levels.
15. The results of an Oaxaca decomposition model confirm that the increase in the proportion of minimum wage employees is not due to a change in worker composition. In other words, it is not due to an increase in the proportion of total employment held by workers more likely to be paid the minimum wage.

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Appendix

Table A.1

Real minimum wage, average hourly earnings and ratio between these two indicators for Canada and the provinces

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	in constant 2013 dollars										
Minimum wage weighted by number of employees for each province											
1983	7.87	7.57	7.91	8.03	7.88	8.24	7.61	8.66	9.31	8.40	7.11
1984	7.81	7.25	7.58	7.69	7.50	7.92	7.93	8.35	8.93	8.19	6.84
1985	7.70	7.42	7.44	7.85	7.17	7.58	7.96	8.61	8.83	7.95	6.63
1986	7.53	7.21	7.64	7.62	7.05	7.39	7.78	8.25	8.88	7.69	6.44
1987	7.60	7.01	7.38	7.36	7.09	7.63	7.98	8.32	8.47	7.39	6.25
1988	7.67	7.18	7.23	7.11	6.85	7.69	7.97	8.31	8.10	7.63	6.74
1989	7.71	7.03	7.61	7.66	6.95	7.72	7.88	7.93	7.76	8.18	7.22
1990	7.73	6.74	7.35	7.29	7.13	7.80	7.97	7.59	8.06	7.73	7.41
1991	7.69	6.90	7.12	6.97	7.06	7.68	8.21	7.60	7.86	7.31	7.12
1992	8.14	7.02	7.15	7.58	7.30	7.85	8.96	7.57	7.82	7.80	7.58
1993	8.31	6.90	7.02	7.72	7.20	7.96	9.22	7.37	8.07	7.92	7.88
1994	8.56	6.82	7.04	7.63	7.16	8.27	9.73	7.27	7.93	7.80	7.89
1995	8.64	6.72	6.92	7.53	7.05	8.44	9.71	7.25	7.78	7.63	8.41
1996	8.81	6.74	6.99	7.46	7.47	8.86	9.55	7.48	7.66	7.46	8.92
1997	8.78	7.08	7.40	7.72	7.51	9.01	9.38	7.33	7.89	7.32	8.85
1998	8.75	7.15	7.67	7.69	7.47	9.02	9.30	7.24	7.79	7.37	8.96
1999	8.74	7.14	7.58	7.59	7.35	8.98	9.12	7.69	8.20	7.97	8.91
2000	8.58	6.85	7.55	7.47	7.44	8.77	8.86	7.70	7.99	8.05	8.85
2001	8.48	7.09	7.62	7.46	7.40	8.68	8.60	7.73	7.76	7.86	9.24
2002	8.39	7.19	7.68	7.41	7.31	8.58	8.43	7.92	7.90	7.61	9.42
2003	8.27	7.35	7.73	7.42	7.14	8.66	8.20	8.08	8.17	7.28	9.21
2004	8.31	7.21	7.86	7.74	7.27	8.62	8.38	8.22	7.99	7.18	9.04
2005	8.38	7.20	7.98	7.69	7.22	8.60	8.54	8.29	7.98	7.47	8.86
2006	8.55	7.65	8.10	8.10	7.43	8.62	8.73	8.50	8.60	8.03	8.71
2007	8.63	8.08	8.35	8.38	7.71	8.73	8.86	8.76	8.83	8.02	8.56
2008	8.98	8.68	8.42	8.67	8.29	9.00	9.30	9.08	9.20	8.80	8.38
2009	9.51	9.62	8.91	9.27	8.67	9.48	10.07	9.41	9.70	9.23	8.38
2010	9.86	10.46	9.27	9.81	9.13	9.89	10.62	9.76	9.80	9.24	8.27
2011	9.88	10.38	9.63	10.05	9.61	9.88	10.50	10.00	9.62	9.23	8.71
2012	10.07	10.17	10.10	10.23	9.96	9.89	10.35	10.29	9.68	9.65	9.99
2013	10.14	10.00	10.00	10.26	10.00	10.07	10.25	10.30	10.00	9.82	10.25
Average hourly earnings											
1983	20.45	16.81	14.37	18.05	17.73	19.51	20.28	19.45	21.06	22.69	23.16
1984	20.17	17.13	14.28	17.98	17.77	19.14	20.14	19.72	20.82	22.19	22.55
1985	19.98	17.05	14.07	17.76	17.45	18.89	20.14	19.22	20.33	21.66	22.33
1986	19.67	16.94	13.83	18.00	17.47	18.57	20.00	18.85	20.14	20.85	21.48
1987	19.36	16.22	13.70	17.83	16.98	18.32	19.90	18.30	19.07	20.00	21.12
1988	19.28	16.36	13.96	17.65	16.71	18.44	19.77	18.21	18.56	19.98	20.62
1989	19.35	16.48	14.14	17.37	16.90	18.46	19.90	18.28	18.10	20.14	20.86
1990	19.29	16.08	14.26	17.43	16.68	18.58	19.88	17.98	18.29	20.04	20.35
1991	19.29	16.20	13.82	17.24	16.57	18.21	20.11	17.97	18.02	20.05	20.40
1992	19.68	16.38	14.05	17.72	17.09	18.74	20.54	18.21	18.11	20.47	20.45
1993	19.57	16.78	14.27	17.65	17.14	18.73	20.40	18.14	17.78	20.58	20.05
1994	19.80	17.09	14.29	17.11	16.76	19.16	20.80	17.85	17.87	20.12	20.27
1995	19.67	17.39	15.49	16.79	16.73	18.95	20.65	17.59	17.85	19.42	20.69
1996	19.88	17.90	16.47	16.85	17.08	19.10	20.92	17.46	17.84	19.66	20.72
1997	19.68	17.27	15.54	16.96	17.02	19.07	20.40	17.26	18.50	20.04	20.71
1998	19.83	17.78	16.03	17.83	17.34	18.60	20.87	17.69	18.75	20.86	20.24
1999	19.76	18.42	16.47	18.48	17.49	18.18	20.95	17.95	18.88	21.74	19.21

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Table A.1 (continued)

Real minimum wage, average hourly earnings and ratio between these two indicators for Canada and the provinces

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
in constant 2013 dollars											
Average hourly earnings											
2000	19.66	18.05	16.05	18.31	17.49	18.20	20.78	17.75	18.69	21.26	19.41
2001	19.96	19.18	17.15	18.93	18.12	18.89	20.80	17.85	19.11	21.85	19.37
2002	19.90	19.27	17.32	18.82	18.07	18.91	20.69	18.25	18.77	21.45	19.45
2003	19.94	20.17	17.25	18.70	18.10	18.81	20.76	18.38	19.12	21.61	19.42
2004	20.17	20.42	17.67	18.87	17.98	19.06	21.01	18.85	19.29	21.87	19.53
2005	20.44	20.67	17.96	19.19	18.40	19.28	21.09	19.23	19.97	22.57	19.85
2006	20.49	20.79	17.66	18.86	18.46	19.13	21.10	19.20	20.34	22.80	20.02
2007	20.85	21.09	17.94	18.91	18.94	19.71	21.41	19.55	20.84	22.99	20.26
2008	21.14	21.01	17.69	18.92	19.37	20.02	21.52	19.84	21.16	23.69	20.68
2009	21.53	21.16	18.96	18.87	19.76	21.14	21.51	20.29	21.84	24.00	21.29
2010	21.61	21.09	18.81	19.74	19.72	21.08	21.64	20.46	22.22	24.37	21.18
2011	21.74	21.76	19.04	19.76	19.69	21.20	21.75	20.85	22.47	24.53	21.14
2012	21.87	22.18	18.88	19.93	19.73	21.20	21.73	20.98	23.06	24.71	21.59
2013	22.27	22.89	18.82	20.01	19.84	21.58	22.00	20.59	23.71	25.32	22.21
percentage											
Ratio of the minimum wage to the average hourly earnings											
1983	38.5	45.0	55.0	44.5	44.4	42.2	37.5	44.5	44.2	37.0	30.7
1984	38.7	42.3	53.1	42.8	42.2	41.4	39.4	42.4	42.9	36.9	30.3
1985	38.5	43.5	52.9	44.2	41.1	40.1	39.5	44.8	43.4	36.7	29.7
1986	38.3	42.6	55.3	42.3	40.3	39.8	38.9	43.8	44.1	36.9	30.0
1987	39.3	43.2	53.8	41.3	41.7	41.6	40.1	45.5	44.4	36.9	29.6
1988	39.8	43.9	51.8	40.3	41.0	41.7	40.3	45.6	43.7	38.2	32.7
1989	39.9	42.6	53.9	44.1	41.1	41.8	39.6	43.4	42.9	40.6	34.6
1990	40.0	41.9	51.5	41.8	42.7	42.0	40.1	42.2	44.1	38.6	36.4
1991	39.9	42.6	51.5	40.4	42.6	42.2	40.8	42.3	43.6	36.4	34.9
1992	41.4	42.8	50.9	42.8	42.7	41.9	43.6	41.6	43.2	38.1	37.1
1993	42.4	41.1	49.2	43.7	42.0	42.5	45.2	40.7	45.4	38.5	39.3
1994	43.2	39.9	49.2	44.6	42.7	43.2	46.8	40.7	44.4	38.8	38.9
1995	43.9	38.7	44.7	44.8	42.2	44.6	47.0	41.2	43.6	39.3	40.6
1996	44.3	37.6	42.4	44.3	43.7	46.4	45.7	42.8	43.0	37.9	43.0
1997	44.6	41.0	47.6	45.5	44.1	47.3	46.0	42.5	42.7	36.5	42.7
1998	44.1	40.2	47.9	43.1	43.1	48.5	44.6	40.9	41.5	35.3	44.3
1999	44.3	38.7	46.0	41.1	42.0	49.4	43.5	42.8	43.4	36.7	46.4
2000	43.6	37.9	47.1	40.8	42.5	48.2	42.6	43.3	42.8	37.9	45.6
2001	42.5	37.0	44.4	39.4	40.8	46.0	41.3	43.3	40.6	36.0	47.7
2002	42.2	37.3	44.3	39.4	40.4	45.4	40.7	43.4	42.1	35.5	48.4
2003	41.5	36.4	44.8	39.7	39.4	46.0	39.5	44.0	42.7	33.7	47.4
2004	41.2	35.3	44.5	41.0	40.4	45.2	39.9	43.6	41.4	32.8	46.3
2005	41.0	34.8	44.4	40.1	39.2	44.6	40.5	43.1	39.9	33.1	44.6
2006	41.7	36.8	45.9	42.9	40.3	45.1	41.4	44.3	42.3	35.2	43.5
2007	41.4	38.3	46.6	44.3	40.7	44.3	41.4	44.8	42.4	34.9	42.3
2008	42.5	41.3	47.6	45.8	42.8	45.0	43.2	45.8	43.5	37.1	40.6
2009	44.2	45.5	47.0	49.1	43.9	44.8	46.8	46.4	44.4	38.5	39.4
2010	45.6	49.6	49.3	49.7	46.3	46.9	49.1	47.7	44.1	37.9	39.1
2011	45.4	47.7	50.6	50.9	48.8	46.6	48.3	48.0	42.8	37.6	41.2
2012	46.0	45.9	53.5	51.3	50.5	46.6	47.6	49.0	42.0	39.1	46.3
2013	45.5	43.7	53.1	51.3	50.4	46.7	46.6	50.0	42.2	38.8	46.1

Sources: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH); Labour Force Survey (LFS); Employment and Social Development Canada (minimum hourly rates by year and by province).